



February 20, 2020

Matthew M. McCombs
Attn: Pam King
Gunnison Ranger District
216 N. Colorado
Gunnison, CO 81230

Dear Matt and Pam,

Thank you for the opportunity to comment on the Wilder-Highland Project proposal. High Country Conservation Advocates (HCCA) recognizes the desire from the Forest Service to prevent, if at all possible, the expansion of this localized beetle outbreak to a district-wide epidemic. At the same time, it is imperative that impacts from logging and road construction be avoided, minimized, and mitigated to the greatest extent possible.

Direct Control Measures

The Forest Service is proposing a combination of direct and indirect control measures in response to this outbreak. Scientists have emphasized three requirements for direct controls to be effective in treating individual infestations: infestations must be detected early, efforts must be applied quickly and intensively, and control programs must be maintained continuously until the desired population level is achieved.¹

Unfortunately, sanitation and other direct control methods for bark beetles have a long history of failing to significantly slow or stop beetles in an outbreak stage. Sanitation is expensive, requires intense effort, and is most likely to be effective only with beetles at endemic, not outbreak levels. According to the public documents available for this project, the situation at Wilder has transitioned from endemic to epidemic already.²

Scientists have noted that one of the biggest problems in assessing the utility of direct controls is a general lack of monitoring or post-hoc assessments of the outcomes of implementing these practices. "Despite decades of direct control and large-scale implementation of these practices, few rigorous studies on its efficacy have been done and there remains no agreement among scientists or foresters regarding its ability to reduce beetle populations or losses of trees."³ The Wilder-Highland project presents an opportunity for the Forest Service, cooperating agencies, Western Colorado University, and the Taylor Park Adaptive Management Group to assess the efficacy of these treatments. Please emphasize this component in the project design, so that lessons learned can be applied to other situations that may arise locally or elsewhere. If this project is successful, it could be a valuable model for future outbreaks.

¹ Six, D. L., E. Biber, and E. Long. 2014. *Management for mountain pine beetle outbreak suppression: does relevant science support current policy?* Forests 5: 103-133. [Attachment 1](#).

² Scoping Notice at 2, Service Trip Report at 2, 4.

³ Six et al. 2014, at 113.

Indirect Control Measures

In addition to direct control measures, the Forest Service is proposing a suite of indirect control measures, including overstory removal, clearcutting, commercial thinning, and pre-commercial thinning. These are generally considered a preemptive measure to be implemented prior to the initiation of a mountain pine beetle outbreak. If the goal is to keep the area forested, is there a scientific basis for logging any live, uninfected trees when a bark beetle outbreak is underway?

As the Forest Service has acknowledged that in fact it may be already too late to have any significant effect on the beetle outbreak, the probability is high that removing live, uninfected trees could actually increase total mortality above levels that occur from just the beetle outbreak alone.⁴ Removing live trees while the outbreak is underway is likely to remove potential survivors that have genetic adaptations that confer resistance to beetles.⁵ This could make future outbreaks more likely. “Our results indicate that during outbreaks, beetle choice may result in strong selection for trees with greater resistance to attack. Our findings suggest that survivorship is genetically based and, thus, heritable. Therefore, retaining survivors after outbreaks to act as primary seed sources could act to promote adaptation.”⁶

New evidence confirms there is a genetic basis for tree survival after beetle outbreaks.⁷ HCCA asks that this project include some additional direction to focus on enhancing natural recovery of tree populations from survivors, to help facilitate a transition to a new forest genetically adapted to an increasingly hotter climate. Baker⁸ reviewed evidence that retaining survivors and post-disturbance natural tree regeneration from seed will further genetic adaptation to the emerging hotter climate and its associated patterns of beetle outbreaks, droughts, and fires. Key to the success of this adaptation approach is to avoid logging survivors or intentionally planting new trees, since those both would reduce selection and genetic adaptation to emerging climate and disturbances.

Is Salvage Logging Necessary?

Salvage logging will have no impact on the success or failure of slowing (or eliminating) the bark beetle outbreak. “Salvage, while often included in beetle management programs, does not actually reduce or impact beetle populations – it is the removal of dead trees for economic or other reasons and often involves removal of trees that are already ‘empty’ of beetles and thus has no impact on beetle population size.”⁹ HCCA asks that salvage logging be limited in size, and asks that new road construction not occur if it is only to facilitate salvage operations. Because this treatment method has no relationship to beetle-control, but rather is a mechanism for providing timber, new roads should not be developed just for this component.

⁴ Six et al. 2014.

⁵ Six et al. 2018, at 1.

⁶ Six, D. L., C. Vergobbi, and M. Cutter. 2018. *Are survivors different? Genetic-based selection of trees by mountain pine beetle during a climate change-driven outbreak in a high-elevation pine forest*. *Frontiers in Plant Science* 9: 993. [Attachment 2](#).

⁷ Six et al. 2018.

⁸ Baker, W. L. 2018b. *Transitioning western U.S. dry forests to limited committed warming with bet-hedging and natural disturbances*. *Ecosphere* 9: article 302288. [Attachment 3](#).

⁹ Six et al. 2014, at 112.

Gunnison Sage-grouse Habitat

Occupied Gunnison Sage-grouse habitat is within the project area and adjacent to it, including haul routes, as noted in the project's Design Features document. Thank you for prohibiting use of access routes in designated critical habitat from March 15 – May 15.

Elk and Mule Deer Winter Range

The project area contains outstanding elk and mule deer winter range and/or winter concentration areas, as noted in the Design Features document. The scoping notice states: "Operational periods would occur between May 15th and December 1st, annually." Thank you for adhering to this schedule to ensure that there are no impacts to wintering wildlife.

Transportation System

Thank you for implementing a three-year closure period for all new or other non-system road utilized. Please ensure enforcement and monitoring.

Thank you for your consideration of our comments.

Matt Reed
Public Lands Director